

**FV17 LIAFJELLET-OLVIKVATNET  
LURØY, NORDLAND COUNTY, NORWAY**

Rockfall Embankments

**Problem**

The FV17 road in Nordland County (Norway) is subject to rockfall and snow valanche hazards. The Site is located between the cities of Lurøy and Olvikvatnet on the coast of the Norwegian Sea.

The initial assessment and preliminary design were performed by EFLA Consulting engineers. Simulations and rolling rock tests conducted by Nordland public authority resulted in a series of design parameters that required the structure to be 5.46m in height, have a maximum base width of 3m, and be able to withstand a maximum snow avalanche pressure of 30 kPa. The barrier was designed with a 76° front and back inclination.

**Solution**

Maccaferri, in cooperation with its local partner PRETEC AS, proposed an optimized solution to the contractor and the investor, aimed at enhancing the durability and the construction efficiency. Customized Green Terramesh DUO elements with 76° front inclination were designed to meet all the design requirements and offer all the advantages of the Terramesh family products. The Polimac coated wire was the perfect choice to perform best at the low temperatures typical of the Nordic environment and guarantee 120 years of durability. The installation efficiency was much higher compared to a traditional wrap-around solution, thanks to the preassembled Terramesh units, and even amplified in these peculiar conditions with limited installation space. Construction started in June 2021 and ended in August 2021. Maccaferri supplied 1025 sqm of bifacial Terramesh units with all the accessories. The length of the embankment was set at 220 m.

**Client:** Nordland fylkeskommune

**Designer / Consultant:** EFLA Consulting Engineers

**Contractor:** AINFRA AS

**Products used (Qty.)**

- Terramesh

1025 sqm of facing

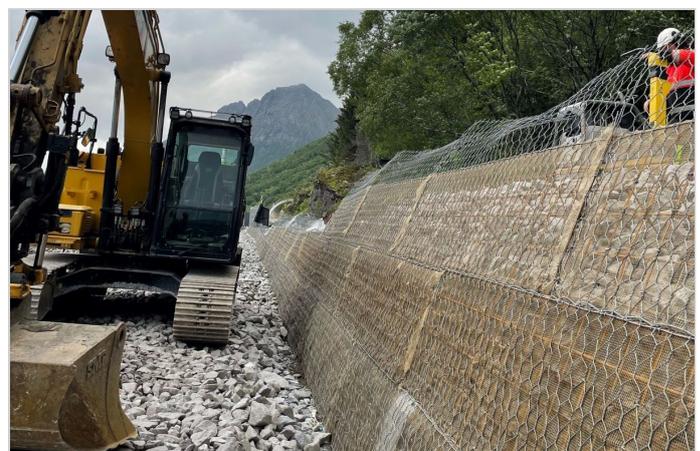
**Date of construction:** 06/2021 - 08/2021

[Google Maps](#)

[Google Earth](#)



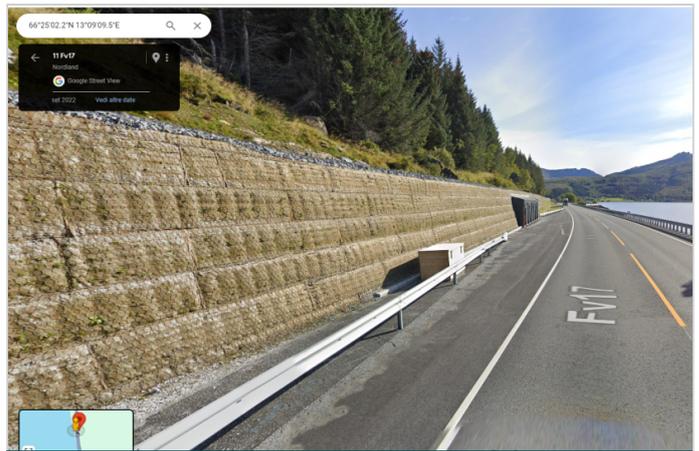
previous situation



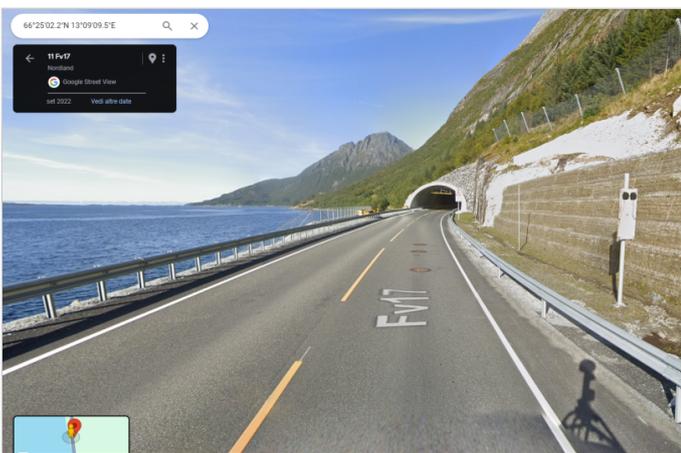
During the installation of GTM DUO units



During the installation of GTM DUO units



Google maps view 2023



Google maps view 2023

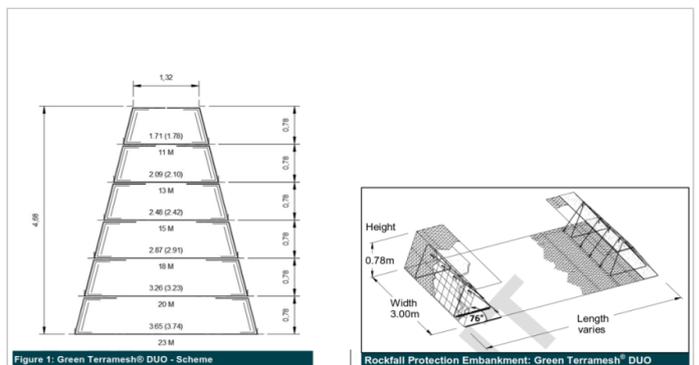
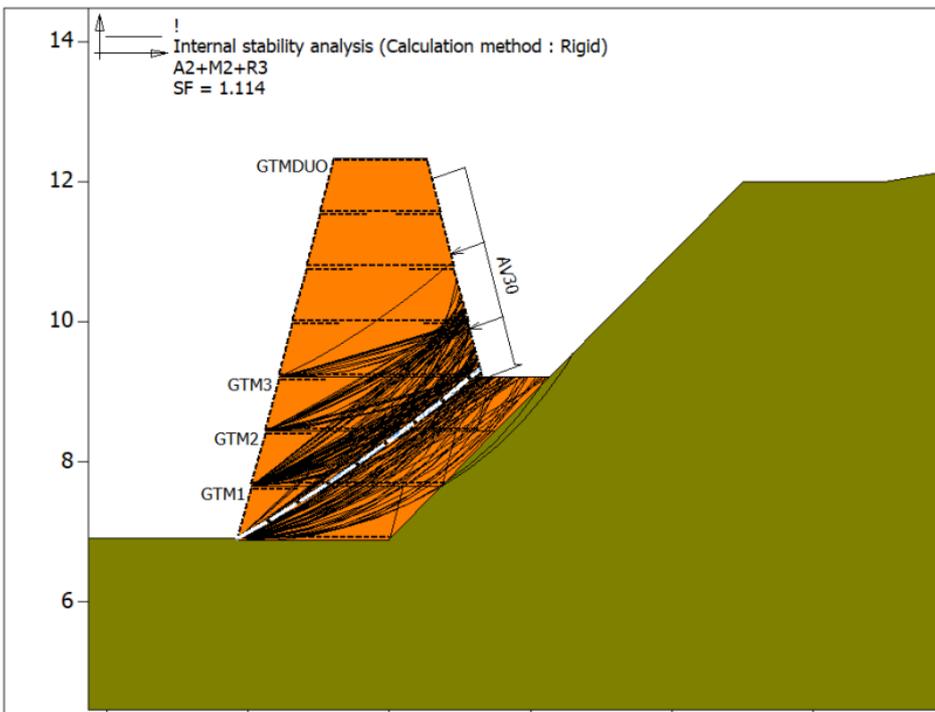
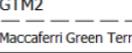


Figure 1: Green Terramesh® DUO - Scheme

Rockfall Protection Embankment: Green Terramesh® DUO

GTM DUO Scheme



		List of Reinforcements		
	GTM1	W=2.15	H=0.78	a=14.0
	Maccaferri Green Terramesh 8/2.2 P	2.15 - 0.78		
	GTM2	W=2.70	H=0.78	a=14.0
	Maccaferri Green Terramesh 8/2.2 P	2.70 - 0.78		
	GTM3	W=3.00	H=0.78	a=14.0
	Maccaferri Green Terramesh 8/2.2 P	3.00 - 0.78		
	GTMDUO	W=2.87	H=3.12	a=14.0
	Maccaferri Green Terramesh 8/2.2 P	2.87 - 0.78		

Typical cross-section for stability checks